

REMARKS

I. Status of Claims

Claims 1-24 are pending in this application, the independent claims being claims 1 and 16. By this Amendment, claims 1-10, 12 and 15-24 are amended.

II. Summary of Action

In the Official Action, claims 1 -15 and 18-20 were objected to on formal grounds. Claims 1, 6, 8, 12, 14-18, 20 and 21 were rejected under 35 U.S.C. §102(e), as anticipated by U.S. Patent No. 6,489,983 (Miyoshi), and claims 23 and 24 were rejected under 35 U.S.C. §103(a), as unpatentable over the Miyoshi '983 patent; claims 1-5, 12, 14 and 15 were rejected under 35 U.S.C. §103(a), as unpatentable over U.S. Patent No. 5,596,353 (Takada) in view of U.S. Patent No. 5,369,476 (Bowers); and claim 7 was rejected under 35 U.S.C. §103(a), as unpatentable over the Miyoshi '983 patent in view of the Takada '353 patent.

Reconsideration and withdrawal of the objections and rejections respectfully are requested in view of the above amendments and the following remarks.

III. Allowable Subject Matter

Initially, Applicants gratefully acknowledge the Examiner's indication that the application contains allowable subject matter, and that claims 9-11, 13, 19 and 22 are allowable over the prior art.

IV. Claim Amendments

The formal objections to the claims respectfully are traversed. Nevertheless, without conceding the propriety of the objections, Claims 1-10, 12 and 15-24 have been amended herein more clearly to recite various novel features of the claimed invention, with particular attention to the Examiner's comments. Support for the proposed amendments may be found in the original application. No new matter has been added.

In this regard, Applicants respectfully submit that the claims (and particularly the term "the image recording medium") do not raise any antecedent basis issues. As noted by the Examiner, claim 1 recites at line 2 "a rewritable image recording medium" and thereafter consistently refers to "the image recording medium" in each subsequent instance; independent claim 16 likewise recites at line 2 "a rewritable image recording medium" and then consistently refers to "the image recording medium" thereafter. Applicants submit that those skilled in the art readily would find this language clear, unambiguous, consistent with common U.S. patent practice, and fully supported by and consistent with the written disclosure in the specification. Nevertheless, without conceding the propriety of the objection, claims 1-10, 12 and 15-24 have been amended herein to use the language "rewritable image recording medium" in each instance throughout the claims, as suggested by the Examiner. Favorable reconsideration of the objection respectfully is requested.

The rejections of the claims over the cited art respectfully are traversed. Nevertheless, without conceding the propriety of the rejections, claims 1 and 16 have been amended to recite even more clearly the feature of an apparatus and method for recording a test image and a distinct predetermined image. In this regard, Applicants submit that these amendments merely are formal in nature and do not narrow the scope of the claims. Moreover, Applicants submit that these amendments do not raise any new issues for consideration; Applicants note the Examiner's comments in the Official Action acknowledging Applicants' arguments previously presented in the Amendment file June 8, 2005, that clearly identify the test image and the predetermined image as distinct images, as disclosed in the specification.

V. Claimed Invention

The present invention relates to a novel image forming device and method for recording a predetermined image on a rewritable image recording medium. In one aspect, as now recited in independent claim 1, the image forming device comprises a recording section that records a predetermined image on a rewritable image recording medium, a control section that controls the recording section to record a test image, distinct from the predetermined image, on the rewritable image recording medium, a detection section that detects an image characteristic value of the test image recorded on the rewritable image recording medium, and a determination section that determines whether the image characteristic value detected by the detection section is within an allowable range or not.

In a similar aspect, independent claim 16 relates to an image forming method comprising recording a test image on a rewritable image recording medium based on predetermined image recording conditions set for a predetermined image, distinct from the test image, to be recorded on the rewritable image recording medium, detecting an image characteristic value of the test image recorded on the rewritable image recording medium, and determining whether the detected image characteristic value is within an allowable range or not.

VI. Prior Art Distinguished

Applicants submit that the prior art fails to anticipate the claimed invention. Moreover, Applicants submit that there are differences between the subject matter sought to be patented and the prior art, such that the subject matter taken as a whole would not have been obvious to one of ordinary skill in the art at the time the invention was made.

The Miyoshi '983 patent relates to an image recording method and image recording apparatus using the method, and discloses an image recording apparatus and method in which a recording head records an image on a reversible thermal recording medium that has a

thermal recording layer containing a cholesteric liquid crystal compound having medium molecular weight. The image recording apparatus comprises a recording head for heating the reversible thermal recording medium, a sensor for detecting a kind of the reversible recording medium, and a speed control unit which is capable of changing a relative print feeding speed of the recording head and the reversible thermal recording medium based on the detected kind of the reversible image recording medium. However, Applicants submit that the Miyoshi '983 patent fails to disclose or suggest at least the above-described features of the present invention. Specifically, Applicants submit the Miyoshi '983 patent relates to an apparatus and method in which a printing head prints a single image, where a detector detects a color characteristic of each pixel of the image as it is printed, and adjusts a speed of the recording head to maintain a proper color characteristic of a subsequent printed pixel of the same single image. Thus, Applicants submit that the Miyoshi '983 patent fails to disclose or suggest an image forming device which records a test image (distinct from the predetermined image to be recorded), and determines whether an image characteristic value of the test image detected by a detecting section is within an allowable range or not, as disclosed in the present application and recited in claims 1 and 16. As discussed in greater detail in the present application, this novel combination of features enables the recording on a rewritable recording media of a predetermined image having an image characteristic value within an allowable range.

The Takada '353 patent relates to an image reading apparatus with a function for correcting non-uniformity in recording density, and discloses an image recording apparatus including an image density reading device for reading the density of a test pattern formed by the recording head and an uneven image density correction device for correcting conditions for driving a plurality of recording elements in accordance with the result of such reading, so as to make even the density of the image formed in accordance with the result of the reading. However, Applicants submit that the Takada '353 patent fails to disclose or suggest at least the

above-described features of the present invention. Nowhere does the Takada '353 patent disclose or suggest an apparatus or method for recording an image on a re-writable recording medium. Rather, in the Takada '353 patent, a control device operates the recording stabilizing device before the test pattern is printed, and operates the test pattern printing device after the recording head has been stabilized by the recording stabilizing device, to correct for a variation in the characteristics of a printing device. Nor is the Takada '353 patent understood to add anything to the Miyoshi '983 patent that would make obvious the claimed invention.

The Bowers '476 patent relates to a toner control system and method for electrographic printing, and discloses a control system and method in which a test image is formed outside a main image on a sheet, and the brightness of one or more predetermined colors in the test image is monitored. However, Applicants submit that the Bowers '476 patent fails to disclose or suggest at least the above-described features of the present invention. Nowhere does the Bowers '476 patent disclose or suggest an apparatus or method for recording an image on a re-writable recording medium. Nor is the Bowers '476 patent understood to add anything to the Takada '353 patent or the Miyoshi '983 patent that would make obvious the claimed invention.

For the above reasons, Applicants submit that claims 1 and 16 are allowable over the prior art.

Claims 2-15 and 17-24 depend from claims 1 and 16, respectively, and are believed allowable for the same reasons. Moreover, each of these dependent claims recites additional features in combination with the features of its respective base claim, and is believed allowable in its own right. Individual consideration of the dependent claims respectfully is requested.

VII. Entry of Amendment is Proper under 37 C.F.R. §1.116

Entry of the amendments is proper under 37 CFR §1.116 since the amendments: (a) place the application in condition for allowance (for the reasons discussed herein); (b) do not raise any new issue requiring further search and/or consideration (as the amendments merely

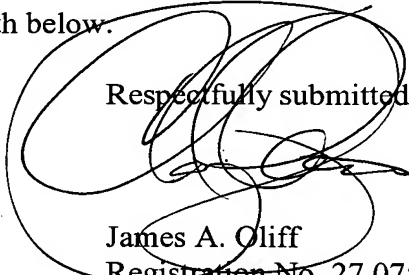
amplify issues previously discussed throughout prosecution); (c) satisfy a requirement of form asserted in the previous Office Action; (d) do not present any additional claims without canceling a corresponding number of finally rejected claims; and (e) place the application in better form for appeal, should an appeal be necessary. The amendments are necessary and were not earlier presented because they are made in response to arguments raised in the final rejection. Entry of the amendments is thus respectfully requested.

VIII. Conclusion

Applicants believe the present Amendment is responsive to each of the points raised by the Examiner in the Official Action, and submit that the application is in condition for allowance. Favorable consideration of claims 1-24 and passage to issue of the subject application at the Examiner's earliest convenience earnestly are solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,


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